

Notice of Allowability

Application No.

10/665,280

Examiner

Thoi V. Duong

Applicant(s)

TAKEDA ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the supplemental amendment filed June 01, 2007.
2. ☒ The allowed claim(s) ~~is~~ are 22, 26, 34 and 35.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/047,216.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 5/24/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This office action is in response to the Supplemental Amendment filed June 01, 2007.

Accordingly, claim 22 was amended, and claims 1-21, 23-25 and 27-33 were cancelled. Currently, claims 22, 26, 34 and 35 are pending in this application.

Allowable Subject Matter

2. Claims 22, 26, 34 and 35 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

Re claim 22, none of the prior art of record discloses, in combination with other limitations as claimed, a liquid crystal display device comprising a first orientation control element formed in said pixel electrode and extending in a nonparallel direction relative to an extending direction of an edge of said pixel electrode, and a second orientation control element extending in a parallel direction relative to an extending direction of said edge,

wherein said first orientation control element is provided on said first and second substrates respectively;

wherein at least a part of liquid crystal molecules of said liquid crystal layer on said second orientation control element are orientated in a vertical direction relative to said substrate when voltage is being applied between said pixel and opposed electrodes;

wherein said first and second orientation are pattern-cut slits; and

wherein said second orientation control element is provided on said second substrate, and said pixel electrode does not exist on at least a part of a place on said first substrate opposed to said second orientation control element.

The most relevant reference, US 6,614,492 B1 to Song, fails to disclose or suggest that at least a part of liquid crystal molecules of said liquid crystal layer on said second orientation control element are orientated in a vertical direction relative to said substrate when voltage is being applied between said pixel and opposed electrodes. As shown in Figs. 2 and 3, Song discloses a first orientation control element (51 and 81), extending in a nonparallel direction relative to an extending direction of an edge of the pixel electrode 50, and a second orientation control element (corresponding to portions A, B, C and D) extending in a parallel direction relative to an extending direction of said edge,

wherein said first orientation control element 51 and 81 is provided on the first and second substrates 10 and 60 respectively and the first control element 51 is formed in the pixel electrode 50;

wherein said first and second orientation are pattern-cut slits (opening patterns);
and

wherein said second orientation control element is provided on said second substrate 60, and said pixel electrode does not exist on at least a part of a place on said first substrate 10 opposed to said second orientation control element.

However, as shown in Fig. 3, the liquid crystal molecules on said second orientation control element are orientated in a non-vertical direction relative to the

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substrate when voltage is being applied between the pixel and opposed electrodes 50 and 80.

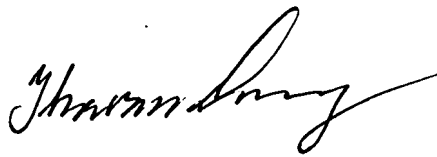
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

Thoi V. Duong



06/08/2007